COURSE TRAINING PROGRAM FORM

Course Name	Code	Regular Semester	ECTS Credits	Credits	Lecture	2
					Application	0
Electric Circuits Laboratory	*014 2012*	*4*	*2*	*1*	Laboratory (Hour/Week)	*0*

Compulsory or Elective	*Compulsory*
Instructor	*Assoc. Prof. Dr. Herman SEDEF*
Course Contents	*Basic Instruments, Resistors, Ohm's law, Kirchhoff's Law, Circuit Theorems, Two-Port Circuit Parameters, Using oscilloscope, Transient Responses of RL, RC, RLC circuits. The Operational Amplifier and its Applications, Sinusoidal Steady State Responses of RLC Circuits, Bode Plots.*
Course Objectives	*To provide the students with a basic understanding of electric circuits, the laws and theorems and methods in electric circuit analysis.*
Course Outcomes (The knowledge and the skills that the student will gain at the end of the course)	*To enable the students to have sufficient experience in measuring practical electric circuits and to design simple circuits for performing a required operation.*
Textbook	*Electric Circuits - Sixth Edition, ISBN 0-13-032120-6* *By: James W. Nilsson and Susan A. Riedel, Prentice Hall, 2001.*
Additional References	*Introduction to Electric Circuit - Third Edition, ISBN 0-471-12702-7* *By: Dorf, R. C. and Svoboda J. A., John Wiley & Sons, 1996*

Prerequisite Courses	
Prerequisite Subjects	-
Homework/Project	-
Laboratory	-
Computer Applications	*Circuit Simulations using Multisim Program.*
Additional Practices	-

Course Evaluation Criteria

	Number	Effective Proportion %
Midterm Exams	-	-
Quiz	-	-
Homework	-	-
Term Projects	*1*	*10*
Term Papers	-	-
Laboratory	*10*	*50*
Other	-	-
Final Exam	*1*	*40*

WEEKLY COURSE PLAN

Week	Subject
1	
2	*Introduction to Measurement Devices*
3	*Resistors, Ohm Law, One-Port Resistive Circuits, Kirchhoff's Voltage Law*
4	*Kirchhoff's Current Law*
5	*Superposition and Reciprocity Theorems*
6	*Thévenin, Norton and Maximum Power Transfer Theorems*
7	*Two-Port Circuit Parameters*
8	*Using Oscilloscope*
9	*Transient Responses Of RL, RC, and RLC Circuits*
10	*Operational Amplifiers and its Applications*
11	*Sinusoidal Steady State Responses of RLC Circuits*
12	*Bode Plots*
13	
14	
15	

Course Outcomes

	The objective knowledge and abilities earned by the student with the Electronics and Communications Engineering Department Program	**1**	**2**	**3**
1	Ability to apply knowledge of natural science and engineering			X
2	Ability to design and conduct experiments, as well as to analyze and interpret data			X
3	Ability to design a system		X	
4	Ability to function as a team member		X	
5	Ability to identify, formulate, and solve engineering problems			X
6	Understanding of professional and ethical responsibility		X	
7	Ability to communicate effectively		X	
8	Knowledge of the impact of the profession in a global and social context	X		
9	Recognition of the need for life-long learning		X	
10	Knowledge of contemporary issues		X	
11	Ability to use modern engineering tools and the techniques			X
12	Providing the opportunity to the student gain more detailed knowledge of chosen research subject in electronics and communications engineering and to apply it.		X	

Contribution of the course: **1:** None, **2:** Partial, **3:** Full.